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Comparison of povidone iodine and DuraPrep, an iodophor-in-isopropyl alcohol solution, for skin disinfection prior to epidural catheter insertion in parturients.

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BACKGROUND: Although rare, infectious sequelae of epidural analgesia can occur. A recently marketed antiseptic solution (DuraPrep) which contains an iodophor in isopropyl alcohol, may provide enhanced and longer-lasting antimicrobial activity and thus be useful in the obstetric setting. The purpose of this study was to evaluate the antiseptics achieved with DuraPrep compared with povidone iodine (PI). **METHODS:** Sixty women in active labor who requested epidural analgesia were randomly assigned to receive skin preparation with either PI or DuraPrep solution. A total of three cultures were obtained from each subject. The first was obtained just prior to skin disinfection, the second was obtained immediately following antiseptics, and the third was obtained just before removal of the catheter. In addition, the distal tip of the catheter was also submitted for culture. **RESULTS:** The clinical characteristics and the risk factors for infection were similar in the two groups. The proportion of subjects with positive skin cultures immediately after skin disinfection differed significantly between the PI and DuraPrep groups (30.3%, respectively, $P = 0.01$). The number of subjects with any positive skin cultures at the time of catheter removal was greater in the PI group as compared to the DuraPrep group (97.5%, respectively, $P = 0.0001$), as was the number of organisms cultured from skin (log CFU 1.93 ± 0.40 0.90 ± 0.23 , respectively, $P = 0.03$). Six catheters, all from the PI group, yielded positive cultures by the roll-plate technique. **CONCLUSION:** As compared to PI, DuraPrep solution was found to provide a greater decrease in the number of positive skin cultures immediately after disinfection, as well as in bacterial regrowth and colonization of the epidural catheters.

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